

CLAIMS

What is claimed is:

1. An apparatus providing an adjustable range of motion for an extremity of a user, comprising:
 - 5 a first lever;
 - a flywheel rotatably mounted on a support for rotation about an axis extending substantially in a horizontal plane, the flywheel having a first plurality of horizontally-aligned bores disposed along a diameter thereof;
 - means for releasably mounting the first lever with one of the bores; and
 - 10 a seat positioned at a distance from the flywheel such that a user seated on the seat may place one of their extremities on the first lever wherein the flywheel is rotated;wherein mounting the first lever within a different bore of the plurality of bores changes the path of motion of the user's extremity positioned on
15 the first lever thereby altering the range of motion of the articulation forming the user's joints on the respective extremity of the user.
2. The apparatus of claim 1, wherein the flywheel is rotatably mounted with a hub connected with a support, and further comprising:
 - 20 a crank extending radially from the hub on a side of the flywheel opposite of the first lever; and
 - a second lever rotatably mounted with the crank such that a user may rotate the flywheel by imputing forces on the first lever and second lever with the extremity.
3. The apparatus of claim 1, further comprising a second plurality of
25 horizontally-aligned bores bisecting the first plurality of bores on the flywheel, along a diameter thereof, the second plurality of bores extending orthogonally from the first plurality of bores.
4. The apparatus of claim 1, further comprising N number of plurality of horizontally-aligned bores bisecting the first plurality of bores on the flywheel along a

diameter thereof, each of the plurality of bores in linear alignment at an angle with respect to the other plurality of bores.

5 5. The apparatus of claim 1, wherein the first lever has a bore extending laterally from a medial lever side face to a lateral lever side face opposite thereof, the means for releasably rotatably mounting the first lever with one bore comprises:

 a sleeve configured to fit within the lever bore; and
 a pin insertable through the sleeve on the lateral lever side face and extending out of the medial lever side face, the pin having a protrusion for engaging with one horizontally-aligned bore of the flywheel.

10 6. The apparatus of claim 1, wherein the flywheel comprises:
 a circular plate having opposing planar surfaces and a perimeter edge;
 a ring sized to fit around the perimeter edge of the circular plate and having an inner edge; and
 a brace member extending across one of the planar surfaces of the plate to span the inner diameter of the ring.

15 7. An adjustable lever assembly for an exercise apparatus, comprising:
 a flywheel rotatably mounted on a support for rotation about an axis extending substantially in a horizontal plane, the flywheel having a first plurality of horizontally-aligned bores disposed along a diameter thereof;
20 a first lever; and
 means for releasably mounting the first lever with one of the bores.

25 8. The apparatus of claim 7, wherein the flywheel is rotatably mounted with a hub connected with a support, and further comprising:
 a crank extending radially from the hub on a side of the flywheel opposite of the first lever; and
 a second lever rotatably mounted with the crank such that a user may rotate the flywheel by inputting forces on the first lever and second lever with the extremity.

9. The apparatus of claim 7, further comprising a second plurality of horizontally-aligned bores bisecting the first plurality of bores on the flywheel, along a diameter thereof, the second plurality of bores extending orthogonally from the first plurality of bores.

5 10. The apparatus of claim 7, further comprising N number of plurality of horizontally-aligned bores bisecting the first plurality of bores on the flywheel along a diameter thereof, each of the plurality of bores in linear alignment at an angle with respect to the other plurality of bores.

10 11. The apparatus of claim 7, wherein the first lever has a bore extending laterally from a medial lever side face to a lateral lever side face opposite thereof, the means for releasably rotatably mounting the first lever with one bore comprises:
a sleeve configured to fit within the lever bore; and
a pin insertable through the sleeve on the lateral lever side face and extending
out of the medial lever side face, the pin having a protrusion for
15 engaging with one horizontally-aligned bore of the flywheel.

12. The apparatus of claim 7, wherein the flywheel comprises:
a circular plate having opposing planar surfaces and a perimeter edge;
a ring sized to fit around the perimeter edge of the circular plate and having an
inner edge; and
20 a brace member extending across one of the planar surfaces of the plate to span the inner diameter of the ring.

13. The apparatus of claim 12, wherein the brace member comprises a plurality of elongate plates having a curved facing surface, and wherein the flywheel is rotatably mounted with a hub, the curved facing surface of each elongate plate
25 abutting the hub.

14. An adjustable lever assembly for an exercise apparatus, comprising:
a flywheel rotatably mounted with a hub on a support for rotation about an
axis extending substantially in a horizontal plane, the flywheel having

a first face, a second face and a plurality of horizontally-aligned bores
extending therethrough from the first face to the second face;
a lever; and
means for releasably mounting the lever with one of the bores.

- 5 15. A method for selectively adjusting the range of motion of articulations
formed from the joints of an extremity of a user engaging in a cycling action,
comprising the steps of:
- providing a seat whereon a user may sit;
- providing a flywheel rotatably mounted on a support spaced from the seat, the
10 flywheel configured for rotation about an axis extending substantially
 in a horizontal plane, the flywheel having a first plurality of bores
 extending in a direction parallel to the axis of rotation and disposed
 along a diameter of the flywheel;
- providing a lever configured for releasable mounting with one of the bores of
15 the flywheel; and
- mounting the lever with one particular bore of the flywheel to select the
 desired articulating motion of the user's joints on the respective
 extremity of the user when the user's extremity is placed on the lever
 and a force is applied thereto.